# The Future Starts Here

## Internet Opportunities in Burngreave


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### *Abstract*

**The existing market in Internet conectivity for Bungreave is outlined. Good practice for connecting safely, securely and maintaining a consistent presence on the internet is put forward. Whilst the dotcom boom is over, the growth in network connectivity and business solutions continues, and some future trends and growth areas are defined.**

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# Internet Opportunities in Burngreave

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## *1. Existing Commercial Provision*

As an inner city area, Burngreave has many different ways of accessing the Internet, though this can be broken down into the following general categories.

### NarrowBand

- **Dial up**

Using an analogue modem to connect to an ISP over the public telephone system.
One of the oldest ways to connect, this is available in two different pricing models.

**Flat Monthly Fee**

You pay a set monthly amount, and are provided with a free phone number for Internet usage, which can be used at anytime. There may be limitations on the time you can actually spend connected, with some ISP's forcing you to redial after a length of time.

**Per Minute**

Your ISP provides you with a telephone number to dial up which you pay for at local rates. They generate revenue by taking a percentage of the call cost from BT, you pay by the minute.
For example Force9 Internet do a number of fixed rate dial up products, ranging from £8.99 per month for 10 hours per week guaranteed with a maximum of 20 hrs per week, up to £99.99 per month for 24hrs a day always on unlimited usage. In addition they also provide an 0845 number, charged at a penny per minute.

- **ISDN** – A faster but relatively expensive way to connect.

ISDN can provide up to 128kbs of bandwidth, but is generally priced per minute making it only useful in situations where its higher bandwidth over analogue is necessary and there are no other suitable products available.

### Broadband

- **Cable Modem** – Connecting via a Cable Network Operator.

**Telewest**

Telewest has an investment in the area with most of Burngreave being easily connected to cable. They provide a number of different packages and pricing schemes dependent on which of their services are purchased. They will provide residential users with up to 2Mb of asynchronous bandwidth, at a 20:1 contention ratio, with a prices ranging from £25 per month for a 512Kb service to £50 per month for the 2Mb service.
For businesses they provide ASP products – e-mail / collaborative working /groupware solutions with a managed Microsoft Exchange service, under the blueyonder workwise brand

- **ADSL** – Connecting via a BT telephone line.

If you have a BT telephone line it can be ADSL enabled, as long as the line is of sufficient quality and close enough to an ADSL enabled exchange. Most BT lines in Burngreave should meet these requirements. Whilst you need a BT telephone line for ADSL, the ADSL connectivity can be bought from any suitable provider. Examples are Eclipse, Zen, Plusnet, Btopenworld. There are a variety if different packages

depending ranging from 512Kb / 256Kb to 2Mb/256Kb. Prices continue to fall. Prices range from £20 per month for a 50:1 512Kb Eclipse 500 ADSL Lite to £130 per month for BT Business 2000 Plus. Differentiating between the different products is difficult, key markers are contention ratio, upstream/downstream ratios and of course price.

The web site http://www.adslguide.org may help compare different ISP's

- **Wireless / Satellite**

FirstNet – http://www.firstnet.net.uk
The section of the wireless spectrum was opened up for commercial licensed use in 2000. In the Burngreave area FirstNet own the license, and can provide up to 2Mb synchronous connectivity. The fact that they are synchronous makes this an attractive option for organisations who wish to host their own services, as well as their ability to put bandwidth into any areas regardless of closeness to telephone exchange or cable, though they are not as competitive on price and the long term viability of the business model in urban areas is problematic.

### Leased Line

Those organisations that require better quality and guaranteed service levels can purchase a leased line. This is a dedicated connection, either point to point (ie joining two offices together) or to an ISP to connect to the internet. Leased lines are much more expensive than ADSL or cable

## *2. Burngreave Community Area Network*

An autonomous, community driven alternative to the commercial solutions described above exists. A number of community organisations in Burngreave, are building a locally managed network that provides a resource sharing mechanism and Internet connectivity for its partners. With a small capital outlay they can connect to the community area network, and access its resources. The organisations gain

- Maximal use of bandwidth, as existing capacity can be recycled through the community
- Bandwidth is purchased collectively minimising revenue costs.
- The connections are supported and managed by the community, providing local training and employment opportunities.

In Burngreave we have developed a customised piece of software that allows a scrap PC to be turned into a sophisticated wireless router. See http://bcan.burngreave.net for more details.

See appendix 1 for more details on the BCAN.

## *3. Public Provision for Internet Access*

Drop in access to the web is available at Burngreave Library and at UKOnline centers

in the area. A number of organisations have computer suites with internet access, though this use is mostly for accredited courses. Its important to remember that the world wide web is not the internet and the transient nature of drop in access minimises the opportunities to make use other areas of the internet (e-mail, IM, file sharing .. ). The government plan to make every public library a wifi hotspot( http://www.theregister.co.uk/content/69/34352.html ), though whether they plan to issue every citizen with suitable equipment to make use of it remains to be seen,

## 4. Content

Whilst having a fast connection to the Internet is desirable, it is important to remember that process of accessing resources is not simply dependent on your PC and network connection, but involves interactions with a large number of different computer systems along the way. The traffic from your computer to a server elsewhere on the Internet will pass through multiple routers and often the limiting factor in access to content is the rate at which the provider can serve that content, rather than the speed at which you can download it. Currently the amount of content that demands a connection faster then 128kbs is limited. This could be movie trailers, and some high end streaming multimedia. There is not a large amount of real time interactive content that demands connections faster than 128kbs, though having faster connections may mean you can access multiple streams simultaneously, for example listening to a near CD quality Internet radio station whilst browsing the web, and chatting in IRC, across multiple PC's.

## 5. Security

The Internet is a public network and connecting to it not without its risks. These include but are not limited to:

- **Accessing unsuitable content.**

There is a wide range of different content available on the Internet. It is very easy to accidently access content that would not normally be considered suitable for a public viewing, for example pornography or extreme political and religious content. Though often not illegal this may cause embarrassment or distress. There are tools, such as Norton Internet Security Suite, available that will attempt to block and filter such content, though it is impossible for them to be 100% successful.

- **Virus Infection**

It is possible to become infected by viruses merely by viewing a (seemingly) innocuous web site, e-mail, or opening an infected document. To prevent this it is imperative that anti-virus software is used and kept up to date. Also your computer operating system should be patched when vulnerabilities are found. To keep the Microsoft operating systems current Microsoft provide a tool called Windows Update This should be run regularly. There are a number of commercial anti virus software products from vendors, such as Symantec, McAffee, E-trust. A free alternative to the commercial products is Grisoft's AVG. http://www.grisoft.com. This is a full anti virus solution for MS Windows, with regular updates, though the updates are less frequent than commercial products.

- **Publishing information inadvertently**

Some computers come with functionality to share files and run web servers, for example Windows 2000 or Windows 98. Peer to peer file sharing applications, such as Kazaa or WinMX, are popular and useful amongst Internet users, but if misconfigured may publish more information that you wish. Whilst useful and easy to use these functions and applications have bugs in them them that can be exploited by malicious users. The software firms that produce the applications will provide patches and fixes to prevent these exploits.

Other applications, known as spyware, will track your computer usage and send that information to third party's. Often these are marketed as fun or power tools that add extra functionality to you PC, like Comet cursor, Gator, or Google toolbar.

To protect yourself against these threats be aware of how your computer works, turnoff services that are not required, only install software that you need, and make sure it is configured correctly. If you decide to take advantage of your computers in built file sharing and web serving features make sure that you understand them fully, and that they are patched against all current software exploits. Using Windows Update will automatically patch you PC for exploits in Microsoft Software. To discover what 'spyware' programs are running on your PC a utility call adaware is available from lavasoft, http://www.lavasoftusa.com/software/adaware . This will analyse your PC and then give you options of removing software that maybe compromising your privacy.

When ever you purchase something on the internet make sure that its done with on a 'secure' web site. The web address will begin with “https://” rather than the usual “http://” and the browser will display a padlock icon in the bottom corner. The traffic between computer and the server will be encrypted as it travels across the network and be difficult for a third party to intercept. It is important to note that the certificate that identifies the web site is valid. It is now becoming more common for criminals to create forgeries of banking sites and create their own digital certificates, to identify them. A valid certificate will be issued by a trusted body, such as Verisign or Thawte, to the company in question. It will identify the server the transaction is with correctly, and will be valid at the current date and time. Any failure to meet these three criteria means the certificate should be examined more carefully and is possibly a forgery.

The reciept of unsolicited bulk email or spam is also becoming more of a problem. To avoid receiving spam it is important to not post ones email address on to public web sites, as software tools exist to crawl web sites harvesting email addresses found. If it is necessary to give an email address to register for a web site or service, a successful strategy is to maintain a second disposable email address with hotmail or yahoo for example for this use and keep your personal email adress private. Should you receive spam email its important never to reply it. Much spam has a link or reply to address within it that appears to offer the chance to opt out from receiving further mail. This is generally a ploy used by spammers to track live email addresses. Another technique

used to track live emails is to insert a link to a web site hidden in the body of the email as an image. This can be difficult to avoid. If you're mail client allows it disable the displaying if images in email and the automatic previewing of emails. This is difficult in Microsoft Outlook, though this functionality has been added to Outlook 2003. Other email clients such as Pegasus Mail and Eudora have these options, and can also make it easier to avoid email viruses which often target Outlook. The best solution to spam email is to delete it without reading it, if at all possible.

- **Having your connection used by others without permission.**

A 'cracker' may be able to take control of your PC, either by directly exploiting a vulnerability in software or by persuading the user to install an 'Trojan horse'. Your PC could then be used as a storage area for illegal content, or to launch an attack on others. A correctly set up firewall can protect you from direct hacking and anti virus software may protect against Trojans. Firewalls come in two types, software firewalls, which is a program that you would run on your PC, and hardware firewalls, which are dedicated devices.

You may wish to run both as each have different benefits. A software firewall can give you information on what programs your PC is running and warning if one of them tries to access the Internet without permission. They can also be useful if you share a LAN with other PC's that you do not fully trust. The latest Apple Mac's and Linux based computers come with a sophisticated software firewalls built in. Windows XP contains a simple firewall, though this is disabled by default. A more sohisticated firewall for all versions of windows is Kerio personal firewall (http://www.kerio.com/kpf_home.html ).This is free for personal use.

A hardware firewall will enable you to share your Internet connection amongst other PC's on a LAN whilst protecting all of them. It may also allow allow you to publish particular services or create private tunnels to other networks.

Some ISP's may provide egress / ingress filtering to help protect their customers, and themselves, from these threats. This should not be considered to be a replacement for using a firewall and installing anti virus software.

## *6. Maintaining an Internet Presence*

As internet access becomes more important, maintaining a consistent presence on the network becomes a necessity. This can range from simply checking an email address regularly to hosting a complex website with dynamic information. Whatever is right for a particular organisation or individual a network presence should be treated like any other asset and managed and maintained.

Often ISP's will provide free email addresses and web space with there connections. Unfortunately these are often tied to the ISP's name (for example fred@btconnect.com or http://www.smith.freeserve.co.uk ) which makes them difficult or impossible to maintain if you change provider. A solution to this problem is to buy a domain name.

## Domain Names

Domain names are ways of locating resources and organisations on the Internet. The Domain naming System (DNS) is a federated, hierarchical system with there existing a fixed number of Top Level Domains (TLD's). The TLD's are organised according to national and organisational type. Each country has its own TLD ( .uk for the United Kingdom, .us for the United States, .au for Australia etc), with generic TLD's of '.com', '.biz', '.info', '.name', '.pro', '.aero', '.coop', '.museum', .org' and '.net' for general usage. Each US state has a TLD as does the American military and government with '.mil' and '.gov'.

Each TLD is managed by a registry and organisations register subdomains beneath the TLD that represents them best, for example 'nissan.com' or 'gov.uk' for the Nissan car company or the UK government. Organisations aggressively protect and purchase many similar domain names to maintain ther brand indentities. Whilst perhaps not needing to go to the lengths of the Nissan car company or the Coca-Cola corporation, if you wish to maintain a consistent internet presence a consistent name is important and certain guidelines should be adhered to.

### *Purchasing*

You don't actually purchase a domain name outright, only rent them from the Registrar for that TLD. The actual purchase is performed on your behalf by an agent of the registry. You are unlikely to deal with the registrar for your TLD unless you are in dispute over the ownerhip of a name.

The actual purchase of a domain name is very simple, with them being commodity items these days. Most ISP's will be be able to provide this service, though there are companies that deal solely in registering and hosting domains. These may be cheaper and more flexible when it comes to making changes or moves. Examples of such companies are http://www.ukreg.com, http://www.123-reg.co.uk, or http://www.fasthosts.co.uk.

If your organisation does not have the capacity to deal with a registration agent and engages a third party to register your name make sure that it is registered to you rather than to the third party. A common mistake of small organisations is to get a third party to register their name but not check how the ownership of that name is recorded. If you have registered a .uk domain the UK registry, http://www.nic.uk , will have sent you a certificate of ownership. A useful tool is for checking ownership of domain names is http://www.samspade.org , though all the internet registry's provide a whois tool which allows searching of their databases.

### *Hosting*

Once you have registered your domain name it will need to be hosted somewhere. This means a record is placed in the TLD with details of how to find your servers, website, deliver your e-mail etc. Usually the company registering your domains will do this automatically, though you may wish for different sections of your domain to be hosted elsewhere. For instance if you manage your own e-mail server you would want

the mail delivering directly to it, or you may wish to wish to devolve responsibility for subdomains of your domain to different business units.

#### *Web Sites*

One of the most important reasons to have a domain name is to host a web site, either to allow the public to learn about your organisation, create a central information resource for members of your organisation or both. Web hosting varies in the richness of its functionality, from simple static pages to database driven dynamically generated pages. Most ISP's bundle simple web hosting in with their connectivity options. For example, Freeserve, offer a maximum of 30MB of basic web space and unlimited e-mail addresses with their 'pay as you go' connection option (0845 number).

Commercial web hosting companies will provide many different levels of functionality from simple web space from around £1.99 per month for 100 MB of web space and 15 mail boxes to £25 per month for 5GB of web space, unlimited mailboxes, 2 online databases, several scripting languages supported, streaming media options, and secure site (https) at fasthosts (http://www.fasthosts.co.uk). Other hosting providers such as http://www.123-reg.co.uk and http://ww.easynet.co.uk have similar solutions.

If one your needs are more sophisticated you can colocate (ie place your own server at a specialist datacenter) or get a fully managed solution (ie rent a server from a provider). The prices for this type of service can grow to whatever your service level and functionality demands. An entry level for this is around £25- £40 per month, for example http://www.serversure.net or http://www.rackspace.co.uk

#### *Maintenance*

After arranging hosting for your site it will need building and maintaining. Whilst building a professional looking web site is difficult, greater difficulty is in actually maintaining that site over the lifetime of the organisation, and ease of maintenance should be a specification at the site design phase. There are various ways of doing this, one of the more sophisticated is to use a content management system. This is a piece of software that allows unskilled workers to upload and publish information to the web site keeping a consistent look and feel, maintain different versions of documents whilst being worked by different team members.

## *7. Digital Divide*

Internet both excerabates and heals the economic and cultural rifts in the community. As an expensive resource it is difficult for those with financial difficulties to gain a foothold on it, and there are many hurdles. As a technology internet communications are by no means transparent and mature, meaning that continual technical support and education is vital. The language of the internet is also mostly english and this can be difficult for people with literacy or language difficulties.

Given a proper strategy for public access and community support there should be no boundary to free access to network resources. Though that strategy must make best efforts to address the diversity of usage, without placing limits on the time, place of

access, or value judgement on the content and use, if it is to be successful. For examples of real world unhindered web usage see appendix 1 - Usage statistics for Burngreave Community Area Network, and http://bcan.burngreave.net/usage/BoneIdol

Access can help fractured communities though. The wide variety of foreign language news sites allow refugees to gain news from their homelands. E-mail and instant messaging allow people to interact in informal ways (part of this document was produced by Instant Messaging conversation between a laptop user on the open Burngreave CAN and another laptop user at a wifi hotspot in Portugal), peer to peer filesharing allows inexpensive access to culture.

As a multilingual community Burngreave is well placed to benefit from the commercial opportunities of globalisation and localisation. Sheffield host an international software localisation firm http://www.sdlintl.com and also Burngreave hosts a number of translation agencies and publishers. The Internet gives new markets for these.

## *8. Future Possibilities.*

The opening up of the local loop by OFTEL has allowed competion in the market for ADSL, currently bandwidth prices continue to fall and its likely that this will continue. Pricing models may also change as usage increases and ISP's may need to pass the expense back to the customer. NTL has introduced a capping policy of 1GB/month of data to its cable modem / broadband customers, above this an additional fee is levied. (See http://www.theregister.co.uk/content/archive/29260.html )

PC's will certainly get more powerful, but the most popular home operating system, Microsoft Windows, is not planning a new release until late 2005 ( see http://www.eweek.com/article2/0,3959,1235502,00.asp ). Internet viruses and worms will become increasingly sophisticated, targetting a variety multiple exploits and as the majority OS ages it will become more vunerable to them, so the Internet will become a more dangerous place. ISP's may limit traffic on and through their networks to confine problems,
( see http://krom.meiring.org.uk/sheflug/mailarchive/2003/10/msg00000.html )

Home networking will become more common as houses gain multiple PC's and wish to share access to their new cheap broadband conections. In addition to the standard PC being connected, the TV / home entertainment centre will become connected. Microsoft have recently released a new version of their Windows XP together with specific hardware called “Windows Media Center” ( http://www.microsoft.com/windowsxp/mediacenter/default.asp ) that contains the functions of a TV set and video recorder. Whilst currently expensive other media providers will soon be providing similar facilities in their set top boxes. For example the “SKY+” set top box has a recording abilities, and the later Telewest boxes have an inbuilt Cable Modem capable of connecting to the Internet. Together with home networking, wireless networking will increase at home. Many new laptops incorporate

a wireless network device, and some ISP's bundle wireless networking kit with their home products
(see http://www.telewest.co.uk/ourcompany/pressreleases/wireless_launch.html ). Its far easier than expecting home owners to run CAT5 cable around their homes, and the security implications are of less relevance for private users.

Mobile devices will continue to gain extra functions. Today many entry level phones contain an e-mail client and browser software, and the biggest selling PDA of 2002-2003 was a telephone (source http://www.theregister.co.uk/content/68/33216.html ).

Connection to the "Network" whether that be a private mobile network or public Internet will be become ubiquitous. Indeed the boundaries between the two are already being blurred and crackers are reported to have exploited mobile phone billing mechanisms from the Internet ( http://www.theregister.co.uk/content/59/33168.html ) .

Application service provider [ASP] solutions will grow, already Telewest offers access to a Microsoft exchange server and Sharepoint Portal server as part of its Byworkwise products (http://www.byworkwise.com ). Vodaphone offers its Live! service giving access to realtime messaging and news streams. Its not hard to see that as connectivity becomes ubiquitous services that sit on top of it will appear.

## *9. Conclusion*

Whilst the dotcom boom of the 1990's may be consigned to history, the opportunities that are available for connecting to and using the Internet are still growing. Access to you data and favourite applications will become increasingly transparent as the user moves between workplaces and homes, meeting cutomers or having a meal in a cafe, and between different modes of activity, work or leisure, information consumer or producer.

The growth of affordable ADSL, and SDSL networking solutions gives opportunities for commerce, installing and maintaining these solutions. The mixed nature of the Burngreave community places us well to export language and design services.

The challenges for the Burngreave community is to keep pace with the changes in technology and find strategies that will maximise our natural resources.

The challenges for any organisation that wishes to look at IT access as a public amenity across the whole of Burngreave are in providing appropriate solutions. The commercial markets provide many different solutions and no single solution is correct for every situation, for home users or businesses, for general public access or specialist learning centre. Any overarching strategy should reflect the diversity of needs and uses, and attempt to encourage local growth.

## *Glossary*

| | |
|---|---|
| ADSL | Asychronous Digital Subscriber Line. A way of getting broadband internet cheaply. It is asynchronous in that the speeds are different incoming to outgoing. See SDSL |
| Bit | Smallest unit of binary information. Either a 1 or a 0 |
| Broadband | Internet Conectivity with more than 128 Kbs bandwidth. See Narrowband |
| Byte | 8 bits |
| Cable Modem | A consumer electronic device to connect computer equipment to the Cable TV network |
| Contention Ratio | The amount of people you share a connection with. |
| DNS | Domain naming system. A system to convert domain names to IP addresses |
| Domain | A subsection of the internet managed in a consistent way |
| Egress | Traffic that leaves a network. See ingress. |
| Ingress | Traffic that enters into a network, hence ingress filtering is the filtering of traffic as it enters. |
| IP address | A unique number that represents a computer or host on the internet |
| IRC | Internet Relay Chat |
| ISDN | Integrated Systems Digital Network. A form a digital telephone line. Mostly superceded by ADSL. |
| ISP | Internet Service provider |
| Kb | Kilobit = 1024 bits |
| Narrowband | Internet Connectivity of less than 128 Kbs see broadband |
| P2P | See peer to peer |
| Peer to Peer | A way of sharing information or files that does not involve central control |
| SDSL | Synchronous Digital Subscriber Line, A way of providing high speed data communications down consumer telephone lines, whilst maintaining the same bandwidth in either direction |
| Trojan | A piece of malicious software that masquerades as something useful. May harvest email addresses or passwords and send them to a third party |
| Virus | A piece of malicious software that replicates. They attach themselves to legitimate programs and each time they are run infect other programs |

# Appendix 1 - Burngreave Community Area Network.

## *Burngreave Community Area Network.*

Burngreave is home to a community built experimental computer networking project. Partially funded by Burngreave New Deal for Communities it has two aspects to it.

1. Community Information Network.
2. Community Area Network.

### *Community Information Network.*

The Community Information Network has gone through several iterations with the much of the development of it being based around the Burngreave Messenger and its web site http://www.burngreavemessenger.org.uk, and the burngreave.net domain.

The Messenger is Burngreaves community newspaper. It has been producing copy monthly, distributed to every household in Burngreave for over 3 years. With the services of a professional web designer it provides a well polished web based version of its print copy. This has not always been the case, and the work of converting content between dtp file formats and html has been undertaken by volunteers.

Burngreave.net, based around a web site http://www.burngreave.net and hosted on dedicated servers within Burngreave, offer unlimited web hosting and e-mail addresses with support for databases and dynamic scripting, spam and virus filtering, together with a toolkit that enables simple management of websites and uploading of content.

### *Community Area Network*

The Burngreave Community Area Network is an experimental fast computer network, on Burngreave Road, that enables the organisations using it to share resources and costs in a managed way.

The main resource that clients share is internet access, currently with 1x 512kb Cable Modem line provide connectivity to approx 30 desktop PC's spread over 5 sites. Usage is varied between residential/home use, office use, and classroom/learning centre use. Bandwidth usage is measured using industry standard SNMP and multi-router traffic grapher http://www.mrtg.org software. Traffic is transparently proxied at the external gateways to allow monitoring of usage, with the functionality to hook in web filtering, using squidGuard (http://www.squidguard.org )

Connectivity between sites is provided by using consumer 802.11b wifi network cards – a standard piece of wireless networking equipment with a variety of specialist external aerials, and customised secondhand PC's running Linux to provide the actual networking and firewalling for each partner organisation.

Initially the network was built with static routing on the SuSE Linux distribution http://www.suse.com but there were several issues with this.

1. As the network became more complex and more sites were added the configuration

of each individual wireless router had to be manually altered.

2. The long term maintenance of each router became problematic as the particular SuSE Linux version became end of life.
3. The design of the router forked into two different devices, one a light weight (ie functionally limited) piece of client premises equipment, which could eventually be slimmed down to an embedded device with no moving parts, and a second gateway device, which would incorporate more functionality and was better suited to a standard PC of (relatively) high capacity (PII 4Gb HDD 128 Mb RAM)

For the client premises equipment we chose the pebble linux distribution specially designed for wireless access points from NYCWireless.net (http://www.nycwireless.net/pebble) and added some software from Southampton Open Wireless Network http://www.sown.org.uk. Our custom piece of software, the Burngreave Pebble is available from http://bcan.burngreave.net. Together with the gateway device, this gives a sophisticated product which offers content filtering, usage monitoring, bandwidth management, as well as standard firewalling and internet acceleration features. Excluding costs of external aeriels and specialist cabling, which may not be necessary depending on the topography and proximity to the rest of the network, a Burngreave Pebble can be produced for around £100 ( redundant PC £25, Networking Cards £25, Wireless Network Card £40 ).

Whilst we don't have any statistics on uptime and availability of the CAN, anecdotal evidence suggests that there have been no outages of more than 24hrs on any partner site since putting it in place in November 2002. Indeed our initial uptimes on the first SuSE based routers were over a hundred days, with power outages onsite being the only reason for downtime. Some issues have arisen since then around the reliablility of second hand PC's. Fortunately if a unit fails we can replace it and build an equivalent 'pebble' in a short amount of time (30 min). The change to a dynamically routed network has created some problems. However we are working with our partners in New York and Southampton to continually refine the software, and have managed to keep downtime to a few minutes and interruption to use a minimum by pre-emptively scheduling changes at weekends.

#### *Community Area Network Usage*

An analysis of around 6months usage of the CAN is below. Apart from a decrease in usage in November there is a steady growth over the period. The statistics for December are for only a 20 days out of the month with an actual growth of around 15% on Octobers usage.

A more detailed analysis of Octobers usage is also given. The daily usage chart shows that some use of community provisioned web access was made on every day of the month. The hourly usage chart shows a daily wave of web access, starting at around 9am peaking at midday and tailing off into the afternoon, after this a second wave of access comes along starting around 6pm and tailing off at midnight, with a third wave starting around 11pm and tailing off at 5am. Throughout the month there has been

usage made of the world wide web at every hour.

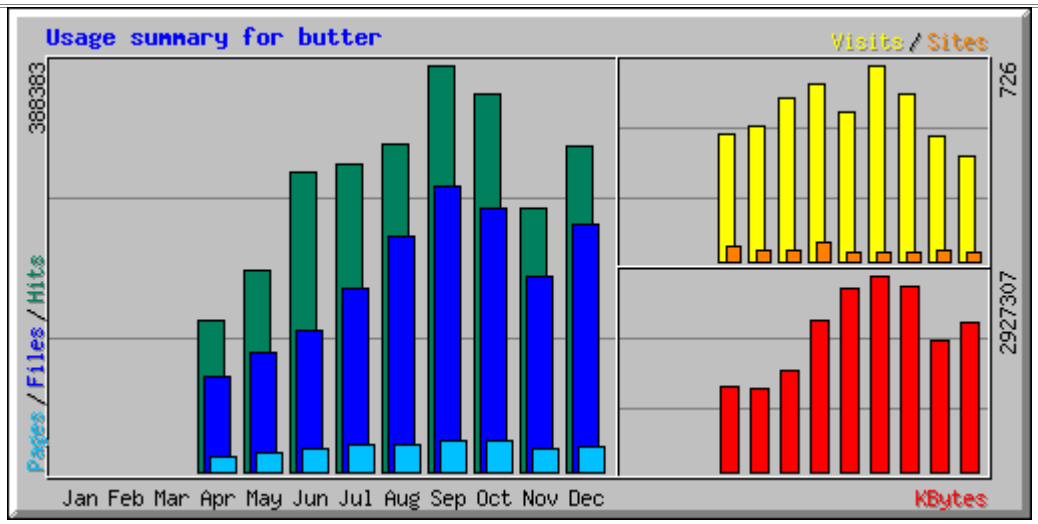
How this web usage translates into actual bandwidth usage can be seen from the Traffic Analysis graphs. The internet connection that these graphs come from is a 512kb BlueYonder cable modem. The blue figures represent traffic entering the CAN, whilst the green traffic leaving. The peaks on the yearly graph in September were from peer to peer file sharing, and the peak on the weekly chart and monthly charts were from internal network tests.

Of most interest though is the average usage figures for each chart, where we can see from the weekly and monthly figures that on average only 20kb/s (though peaks have been far higher) have been used over the last month of the 512kb/s available. It is from these figure that we draw our conclusions that

1. Bandwidth is highly scalable for simple web browsing across large numbers of computers
2. Community Area Networking is a cost effective solution for Community/Voluntary organisations who wish to share resources and costs. The capital outlay is the same order as for a dedicated private internet connection (£100-200) but the revenue costs are shared amongst the partners.

# *April -December 2003 Usage Statistics for Burngreave CAN*

**Summary Period: Last 12 Months**
**Generated 30-Dec-2003 00:26 GMT**




## *Summary by Month*

| *Month* | *Daily Avg* | | | | *Monthly Totals* | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Hits* | *Files* | *Pages* | *Visits* | *Sites* | *KBytes* | *Visits* | *Pages* | *Files* | *Hits* |
| Dec 2003 | 14849 | 11291 | 1155 | 18 | 36 | 2231193 | 390 | 24260 | 237118 | 311848 |
| Nov 2003 | 8375 | 6194 | 739 | 15 | 41 | 1963785 | 464 | 22192 | 185848 | 251251 |
| Oct 2003 | 11641 | 8130 | 954 | 19 | 34 | 2759909 | 615 | 29596 | 252033 | 360888 |
| Sep 2003 | 12946 | 9058 | 996 | 24 | 35 | 2927307 | 726 | 29881 | 271747 | 388383 |
| Aug 2003 | 10094 | 7251 | 826 | 17 | 37 | 2726104 | 555 | 25609 | 224793 | 312941 |
| Jul 2003 | 9443 | 5637 | 836 | 21 | 67 | 2260478 | 656 | 25922 | 174772 | 292733 |
| Jun 2003 | 9852 | 4643 | 763 | 20 | 38 | 1509723 | 603 | 22146 | 134674 | 285730 |
| May 2003 | 6206 | 3659 | 586 | 16 | 42 | 1254010 | 501 | 18190 | 113457 | 192399 |
| Apr 2003 | 5168 | 3255 | 525 | 16 | 53 | 1259761 | 467 | 14704 | 91144 | 144718 |
| *Totals* | | | | | | *18892270* | *4977* | *212500* | *1685586* | *2540891* |

Generated by **Webalizer Version 2.01**

# *October 2003 Usage Statistics for Burngreave CAN*

**Summary Period: October 2003**
**Generated 30-Dec-2003 00:26 GMT**

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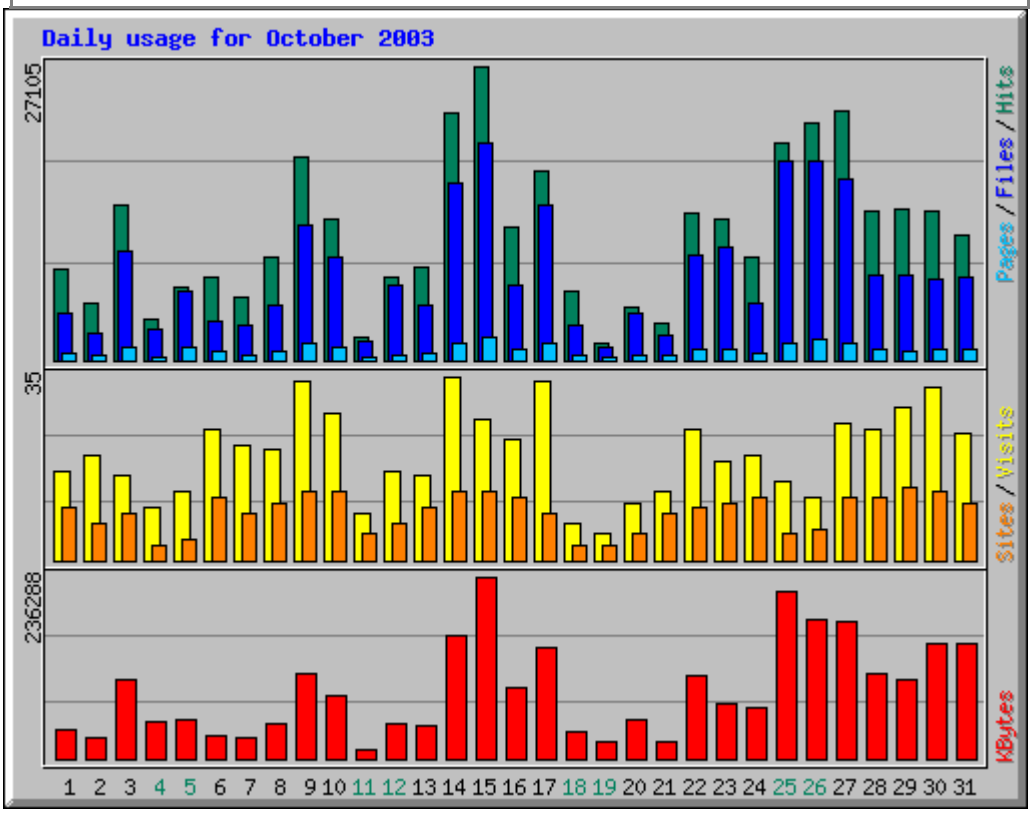
[Daily Statistics] [Hourly Statistics] [URLs] [Entry] [Exit] [Sites] [Countries]

| *Monthly Statistics for October 2003* | | |
|---|---|---|
| Total Hits | | **360888** |
| Total Files | | **252033** |
| Total Pages | | **29596** |
| Total Visits | | **615** |
| Total KBytes | | **2759909** |
| Total Unique Sites | | **34** |
| Total Unique URLs | | **124340** |
| | ***Avg*** | ***Max*** |
| Hits per Hour | **485** | **4740** |
| Hits per Day | **11641** | **27105** |
| Files per Day | **8130** | **20044** |
| Pages per Day | **954** | **2148** |
| Visits per Day | **19** | **35** |
| KBytes per Day | **89029** | **236288** |
| ***Hits by Response Code*** | | |
| Undefined response code | | **5870** |
| Code 200 - OK | | **252033** |
| Code 201 - Created | | **40** |
| Code 204 - No Content | | **216** |
| Code 206 - Partial Content | | **1621** |
| Code 300 - Multiple Choices | | **1** |
| Code 301 - Moved Permanently | | **724** |
| Code 302 - Found | | **11703** |
| Code 303 - See Other | | **63** |
| Code 304 - Not Modified | | **77341** |
| Code 400 - Bad Request | | **4** |
| Code 401 - Unauthorized | | **399** |
| Code 403 - Forbidden | | **437** |

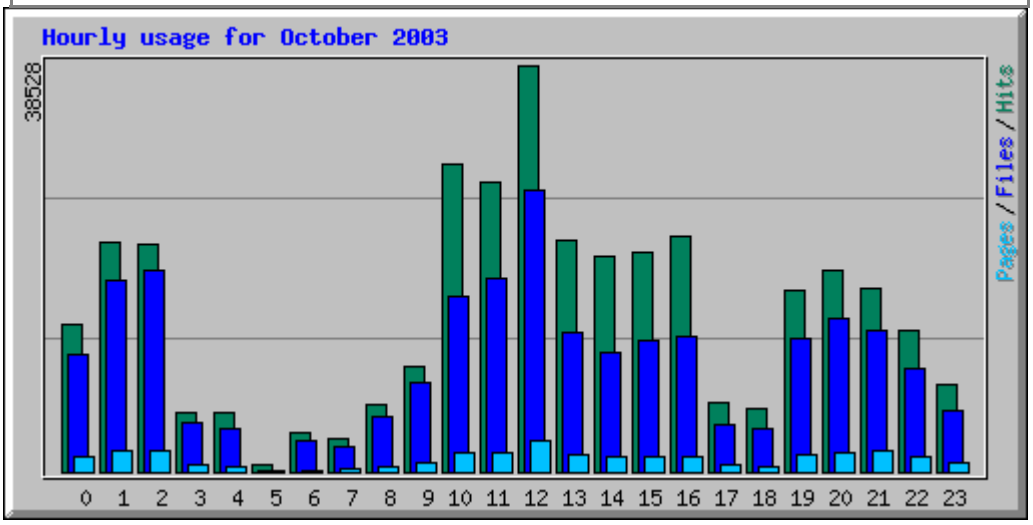
| | |
|---|---|
| Code 404 - Not Found | **9921** |
| Code 405 - Method Not Allowed | **3** |
| Code 406 - Not Acceptable | **2** |
| Code 408 - Request Timeout | **4** |
| Code 411 - Length Required | **44** |
| Code 500 - Internal Server Error | **169** |
| Code 503 - Service Unavailable | **50** |
| Code 504 - Gateway Timeout | **243** |




## *Daily Statistics for October 2003*

| *Day* | *Hits* | | *Files* | | *Pages* | | *Visits* | | *Sites* | | *KBytes* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | **8322** | 2.31% | **4259** | 1.69% | **562** | 1.90% | **17** | 2.76% | **10** | 29.41% | **38691** | 1.40% |
| **2** | **5267** | 1.46% | **2454** | 0.97% | **441** | 1.49% | **20** | 3.25% | **7** | 20.59% | **26801** | 0.97% |
| **3** | **14317** | 3.97% | **9975** | 3.96% | **1205** | 4.07% | **16** | 2.60% | **9** | 26.47% | **101587** | 3.68% |
| **4** | **3788** | 1.05% | **2792** | 1.11% | **330** | 1.12% | **10** | 1.63% | **3** | 8.82% | **47349** | 1.72% |
| **5** | **6771** | 1.88% | **6376** | 2.53% | **1146** | 3.87% | **13** | 2.11% | **4** | 11.76% | **49742** | 1.80% |
| **6** | **7600** | 2.11% | **3679** | 1.46% | **769** | 2.60% | **25** | 4.07% | **12** | 35.29% | **29215** | 1.06% |
| **7** | **5875** | 1.63% | **3265** | 1.30% | **463** | 1.56% | **22** | 3.58% | **9** | 26.47% | **28124** | 1.02% |
| **8** | **9518** | 2.64% | **5050** | 2.00% | **743** | 2.51% | **21** | 3.41% | **11** | 32.35% | **45046** | 1.63% |
| **9** | **18637** | 5.16% | **12513** | 4.96% | **1615** | 5.46% | **34** | 5.53% | **13** | 38.24% | **110272** | 4.00% |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **10** | **13077** | 3.62% | **9588** | 3.80% | **1120** | 3.78% | **28** | 4.55% | **13** | 38.24% | **81156** | 2.94% |
| **11** | **2031** | 0.56% | **1783** | 0.71% | **234** | 0.79% | **9** | 1.46% | **5** | 14.71% | **12566** | 0.46% |
| **12** | **7703** | 2.13% | **6880** | 2.73% | **490** | 1.66% | **17** | 2.76% | **7** | 20.59% | **46488** | 1.68% |
| **13** | **8548** | 2.37% | **5010** | 1.99% | **696** | 2.35% | **16** | 2.60% | **10** | 29.41% | **42195** | 1.53% |
| **14** | **22704** | 6.29% | **16314** | 6.47% | **1612** | 5.45% | **35** | 5.69% | **13** | 38.24% | **160977** | 5.83% |
| **15** | **27105** | 7.51% | **20044** | 7.95% | **2148** | 7.26% | **27** | 4.39% | **13** | 38.24% | **236288** | 8.56% |
| **16** | **12315** | 3.41% | **6884** | 2.73% | **931** | 3.15% | **23** | 3.74% | **12** | 35.29% | **91365** | 3.31% |
| **17** | **17424** | 4.83% | **14247** | 5.65% | **1581** | 5.34% | **34** | 5.53% | **9** | 26.47% | **144418** | 5.23% |
| **18** | **6414** | 1.78% | **3304** | 1.31% | **498** | 1.68% | **7** | 1.14% | **3** | 8.82% | **35422** | 1.28% |
| **19** | **1495** | 0.41% | **1256** | 0.50% | **193** | 0.65% | **5** | 0.81% | **3** | 8.82% | **22696** | 0.82% |
| **20** | **4965** | 1.38% | **4262** | 1.69% | **546** | 1.84% | **11** | 1.79% | **5** | 14.71% | **50639** | 1.83% |
| **21** | **3477** | 0.96% | **2352** | 0.93% | **376** | 1.27% | **13** | 2.11% | **9** | 26.47% | **21826** | 0.79% |
| **22** | **13481** | 3.74% | **9695** | 3.85% | **1058** | 3.57% | **25** | 4.07% | **10** | 29.41% | **108939** | 3.95% |
| **23** | **12985** | 3.60% | **10465** | 4.15% | **961** | 3.25% | **19** | 3.09% | **11** | 32.35% | **71064** | 2.57% |
| **24** | **9426** | 2.61% | **5290** | 2.10% | **621** | 2.10% | **20** | 3.25% | **12** | 35.29% | **66283** | 2.40% |
| **25** | **19978** | 5.54% | **18337** | 7.28% | **1626** | 5.49% | **15** | 2.44% | **5** | 14.71% | **217719** | 7.89% |
| **26** | **21923** | 6.07% | **18414** | 7.31% | **2008** | 6.78% | **12** | 1.95% | **6** | 17.65% | **180020** | 6.52% |
| **27** | **22964** | 6.36% | **16614** | 6.59% | **1600** | 5.41% | **26** | 4.23% | **12** | 35.29% | **178942** | 6.48% |
| **28** | **13656** | 3.78% | **7899** | 3.13% | **1033** | 3.49% | **25** | 4.07% | **12** | 35.29% | **110987** | 4.02% |
| **29** | **13900** | 3.85% | **7911** | 3.14% | **866** | 2.93% | **29** | 4.72% | **14** | 41.18% | **103713** | 3.76% |
| **30** | **13648** | 3.78% | **7406** | 2.94% | **1104** | 3.73% | **33** | 5.37% | **13** | 38.24% | **149817** | 5.43% |
| **31** | **11574** | 3.21% | **7715** | 3.06% | **1020** | 3.45% | **24** | 3.90% | **11** | 32.35% | **149561** | 5.42% |




## *Hourly Statistics for October 2003*

| *Hour* | *Hits* | | *Files* | | *Pages* | | *KBytes* | |
|---|---|---|---|---|---|---|---|---|
| | *Avg* | *Total* | *Avg* | *Total* | *Avg* | *Total* | *Avg* | *Total* |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 449 | 13938 | 3.86% | 357 | 11070 | 4.39% | 44 | 1383 | 4.67% | 4255 | 131915 | 4.78% |
| 1 | 702 | 21788 | 6.04% | 587 | 18213 | 7.23% | 61 | 1914 | 6.47% | 6328 | 196159 | 7.11% |
| 2 | 695 | 21570 | 5.98% | 613 | 19033 | 7.55% | 64 | 2006 | 6.78% | 6577 | 203897 | 7.39% |
| 3 | 181 | 5636 | 1.56% | 151 | 4708 | 1.87% | 18 | 571 | 1.93% | 1497 | 46419 | 1.68% |
| 4 | 178 | 5540 | 1.54% | 131 | 4072 | 1.62% | 12 | 401 | 1.35% | 1599 | 49577 | 1.80% |
| 5 | 24 | 750 | 0.21% | 6 | 186 | 0.07% | 0 | 4 | 0.01% | 21 | 648 | 0.02% |
| 6 | 119 | 3696 | 1.02% | 97 | 3029 | 1.20% | 6 | 188 | 0.64% | 1181 | 36614 | 1.33% |
| 7 | 100 | 3128 | 0.87% | 75 | 2329 | 0.92% | 8 | 254 | 0.86% | 684 | 21193 | 0.77% |
| 8 | 205 | 6364 | 1.76% | 168 | 5234 | 2.08% | 18 | 565 | 1.91% | 1386 | 42966 | 1.56% |
| 9 | 322 | 10010 | 2.77% | 270 | 8382 | 3.33% | 28 | 880 | 2.97% | 2623 | 81319 | 2.95% |
| 10 | 937 | 29058 | 8.05% | 535 | 16612 | 6.59% | 60 | 1885 | 6.37% | 5197 | 161099 | 5.84% |
| 11 | 886 | 27492 | 7.62% | 588 | 18246 | 7.24% | 59 | 1857 | 6.27% | 7544 | 233855 | 8.47% |
| 12 | 1242 | 38528 | 10.68% | 861 | 26718 | 10.60% | 94 | 2931 | 9.90% | 8700 | 269685 | 9.77% |
| 13 | 707 | 21920 | 6.07% | 426 | 13214 | 5.24% | 52 | 1628 | 5.50% | 4235 | 131292 | 4.76% |
| 14 | 658 | 20426 | 5.66% | 366 | 11352 | 4.50% | 48 | 1517 | 5.13% | 3624 | 112359 | 4.07% |
| 15 | 668 | 20720 | 5.74% | 400 | 12429 | 4.93% | 43 | 1339 | 4.52% | 3286 | 101861 | 3.69% |
| 16 | 719 | 22311 | 6.18% | 411 | 12746 | 5.06% | 47 | 1464 | 4.95% | 3977 | 123301 | 4.47% |
| 17 | 214 | 6637 | 1.84% | 141 | 4390 | 1.74% | 22 | 709 | 2.40% | 1863 | 57744 | 2.09% |
| 18 | 190 | 5919 | 1.64% | 131 | 4078 | 1.62% | 12 | 384 | 1.30% | 1068 | 33115 | 1.20% |
| 19 | 551 | 17105 | 4.74% | 404 | 12545 | 4.98% | 54 | 1684 | 5.69% | 3765 | 116702 | 4.23% |
| 20 | 616 | 19107 | 5.29% | 468 | 14521 | 5.76% | 57 | 1787 | 6.04% | 6782 | 210235 | 7.62% |
| 21 | 563 | 17454 | 4.84% | 429 | 13320 | 5.29% | 61 | 1898 | 6.41% | 4898 | 151826 | 5.50% |
| 22 | 434 | 13471 | 3.73% | 317 | 9845 | 3.91% | 46 | 1429 | 4.83% | 4876 | 151152 | 5.48% |
| 23 | 268 | 8320 | 2.31% | 185 | 5761 | 2.29% | 29 | 918 | 3.10% | 3064 | 94977 | 3.44% |

## *Top 30 of 124340 Total URLs*

| # | Hits | | KBytes | | URL |
|---|---|---|---|---|---|
| 1 | 1696 | 0.47% | 2337 | 0.08% | http://jazad.aljazeera.net/jazcommerce/banner.asp |
| 2 | 1542 | 0.43% | 1316 | 0.05% | http://tooltips.hotbar.com/dynamic/hotbar/disp/3.0/ToolTipDisp.dll |
| 3 | 1510 | 0.42% | 8360 | 0.30% | http://ie.search.msn.com/en-gb/srchasst/srchasst.htm |
| 4 | 1506 | 0.42% | 325 | 0.01% | http://ion.bluestreak.com/intel/intel_english.txt |
| 5 | 1504 | 0.42% | 389 | 0.01% | http://s0b.bluestreak.com/flashtracking/tracking_conduit.swf |
| 6 | 1397 | 0.39% | 7055 | 0.26% | http://ie.search.msn.com/cfgs/cfg/css/en-gb_CSS_Classic.css |
| 7 | 1354 | 0.38% | 1198 | 0.04% | http://al-ayyam-yemen.com/cntr.asp |
| 8 | 1249 | 0.35% | 12007 | 0.44% | http://ie.search.msn.com/static/srchcommon.enc |
| 9 | 1121 | 0.31% | 11820 | 0.43% | http://ads.osdn.com/ |

| | | | | | |
|---|---|---|---|---|---|
| 10 | 993 | 0.28% | 3350 | 0.12% | http://updates.hotbar.com/updates/hotbar/hostol/buttons/v3.0/webbuttons.sdf |
| 11 | 965 | 0.27% | 24401 | 0.88% | http://ie.search.msn.com/static/srchasst.enc |
| 12 | 822 | 0.23% | 9483 | 0.34% | http://www.triumphpc.com/cgi-bin/nph-proxy.cgi/010110A/ |
| 13 | 794 | 0.22% | 3636 | 0.13% | http://www.google.com/search |
| 14 | 745 | 0.21% | 800 | 0.03% | http://ads.arabia.com/ |
| 15 | 706 | 0.20% | 6168 | 0.22% | http://uk.f861.mail.yahoo.com/ym/ShowFolder |
| 16 | 535 | 0.15% | 6588 | 0.24% | http://download.microsoft.com/download/8/a/4/8a42bcae-f533-4468-b871-d2bc8dd32e9e/SETUP9x.EXE |
| 17 | 476 | 0.13% | 135 | 0.00% | http://us.js1.yimg.com/us.yimg.com/lib/pim/c3/ylib_dom.js |
| 18 | 474 | 0.13% | 165 | 0.01% | http://us.js1.yimg.com/us.yimg.com/lib/pim/j3/pim.js |
| 19 | 458 | 0.13% | 6667 | 0.24% | http://download.microsoft.com/download/8/a/4/8a42bcae-f533-4468-b871-d2bc8dd32e9e/SETUPNT.EXE |
| 20 | 415 | 0.11% | 115 | 0.00% | http://us.js1.yimg.com/us.yimg.com/lib/pim/css2/pim_css.js |
| 21 | 414 | 0.11% | 107 | 0.00% | http://us.js1.yimg.com/us.yimg.com/lib/pim/css2/pim_style_blue.css |
| 22 | 414 | 0.11% | 105 | 0.00% | http://us.js1.yimg.com/us.yimg.com/lib/pim/css2/pim_style_ie_blue.css |
| 23 | 403 | 0.11% | 132 | 0.00% | http://uk.f861.mail.yahoo.com/lib_web/pulldowns.js |
| 24 | 383 | 0.11% | 1012 | 0.04% | http://adopt.hotbar.com/adopt.jsp |
| 25 | 370 | 0.10% | 247 | 0.01% | http://liveupdate.symantecliveupdate.com/avenge |
| 26 | 355 | 0.10% | 2452 | 0.09% | http://dynamic.hotbar.com/dynamic/hotbar/disp/3.0/sitedisp.dll |
| 27 | 354 | 0.10% | 573 | 0.02% | http://bannerserver.gator.com/bannerserver/bannerserver.dll |
| 28 | 346 | 0.10% | 1469 | 0.05% | http://www.asharqalawsat.com/include/showthumbnail.asp |
| 29 | 337 | 0.09% | 126 | 0.00% | http://service.bfast.com/bfast/serve |
| 30 | 333 | 0.09% | 529 | 0.02% | http://www.google.com/ |

View All URLs

## *Top 10 of 124340 Total URLs By KBytes*

| # | Hits | | KBytes | | URL |
|---|---|---|---|---|---|
| 1 | 965 | 0.27% | 24401 | 0.88% | http://ie.search.msn.com/static/srchasst.enc |
| 2 | 1 | 0.00% | 17839 | 0.65% | http://games-dl.real.com/RealArcadeBundle/airstrike3d_W2V0.exe |
| 3 | 1 | 0.00% | 16476 | 0.60% | http://games-dl.real.com/RealArcadeBundle/trickshot_W2V0.exe |
| 4 | 1 | 0.00% | 12678 | 0.46% | http://www2.getafile.com/cgi-bin/merlot/get/techsmith/999/camtasiaf.exe |
| 5 | 1249 | 0.35% | 12007 | 0.44% | http://ie.search.msn.com/static/srchcommon.enc |
| 6 | 1121 | 0.31% | 11820 | 0.43% | http://ads.osdn.com/ |
| 7 | 1 | 0.00% | 11813 | 0.43% | http://games-dl.real.com/RealArcadeBundle/gutterball3d_W2V0.exe |
| 8 | 822 | 0.23% | 9483 | 0.34% | http://www.triumphpc.com/cgi-bin/nph-proxy.cgi/010110A/ |
| 9 | 20 | 0.01% | 9425 | 0.34% | http://www.shac.net/flashclips/upcomingevents.swf |

| | | | | | |
|---|---|---|---|---|---|
| 10 | 231 | 0.06% | 8812 | 0.32% | http://www.burngreave.net/ |

## Top 10 of 156 Total Entry Pages

| # | Hits | | Visits | | URL |
|---|---|---|---|---|---|
| 1 | 333 | 0.09 % | 56 | 10.24 % | http://www.google.com/ |
| 2 | 231 | 0.06 % | 41 | 7.50 % | http://www.burngreave.net/ |
| 3 | 115 | 0.03 % | 39 | 7.13 % | http://www.alfhood.com/ |
| 4 | 74 | 0.02 % | 25 | 4.57 % | http://www.mozilla.org/start/ |
| 5 | 26 | 0.01 % | 23 | 4.20 % | http://sea1.oe.hotmail.com/cgi-bin/hmdata/sharon_bwrc@hotmail.com/folders/ |
| 6 | 30 | 0.01 % | 23 | 4.20 % | http://www.internet-optimizer.com/conf/signin/ |
| 7 | 69 | 0.02 % | 21 | 3.84 % | http://www.yemenirefugee.org/ |
| 8 | 34 | 0.01 % | 18 | 3.29 % | http://www.findthewebsiteyouneed.com/ |
| 9 | 217 | 0.06 % | 15 | 2.74 % | http://www.aljazeera.net/ |
| 10 | 19 | 0.01 % | 13 | 2.38 % | http://www.inetd.f9.co.uk/bitpart/ |

## Top 10 of 337 Total Exit Pages

| # | Hits | | Visits | | URL |
|---|---|---|---|---|---|
| 1 | 231 | 0.06% | 19 | 3.69% | http://www.burngreave.net/ |
| 2 | 235 | 0.07% | 18 | 3.50% | http://us.update.companion.yahoo.com/slv/v4/2.html |
| 3 | 745 | 0.21% | 17 | 3.30% | http://ads.arabia.com/ |
| 4 | 1121 | 0.31% | 15 | 2.91% | http://ads.osdn.com/ |
| 5 | 217 | 0.06% | 8 | 1.55% | http://www.aljazeera.net/ |
| 6 | 9 | 0.00% | 8 | 1.55% | http://www.barnsley.ac.uk/ |
| 7 | 12 | 0.00% | 7 | 1.36% | http://6arab.com/singers/5aleeji/abobaker/ |
| 8 | 57 | 0.02% | 6 | 1.17% | http://al-ayyam-yemen.com/TodaySport.htm |
| 9 | 52 | 0.01% | 6 | 1.17% | http://al-ayyam-yemen.com/_vti_bin/fpcount.exe/ |
| 10 | 100 | 0.03% | 6 | 1.17% | http://windowsupdate.microsoft.com/R1150/v31site/ |

## Top 30 of 34 Total Sites

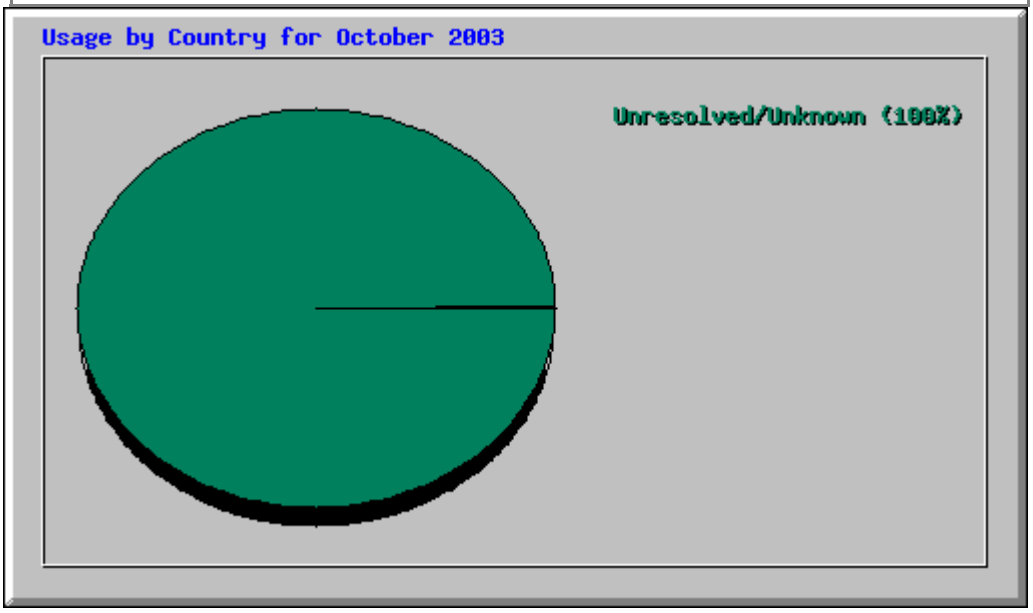
| # | Hits | | Files | | KBytes | | Visits | | Hostname |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 139593 | 38.68 % | 130043 | 51.60 % | 1300521 | 47.12 % | 60 | 9.76 % | 10.10.2.3 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **2** | **49899** | 13.83 % | **24500** | 9.72 % | **246410** | 8.93 % | **82** | 13.33 % | 10.10.2.148 |
| **3** | **49475** | 13.71 % | **28436** | 11.28 % | **505647** | 18.32 % | **64** | 10.41 % | 10.10.2.155 |
| **4** | **34738** | 9.63 % | **26327** | 10.45 % | **265509** | 9.62 % | **135** | 21.95 % | 10.10.2.2 |
| **5** | **20712** | 5.74 % | **6277** | 2.49 % | **63947** | 2.32 % | **60** | 9.76 % | 10.10.2.133 |
| **6** | **17614** | 4.88 % | **8826** | 3.50 % | **61675** | 2.23 % | **29** | 4.72 % | 10.10.2.131 |
| **7** | **10424** | 2.89 % | **4973** | 1.97 % | **55568** | 2.01 % | **18** | 2.93 % | 10.10.2.151 |
| **8** | **6885** | 1.91 % | **3880** | 1.54 % | **35366** | 1.28 % | **21** | 3.41 % | 10.10.2.130 |
| **9** | **6196** | 1.72 % | **3663** | 1.45 % | **30174** | 1.09 % | **21** | 3.41 % | 192.168.0.187 |
| **10** | **6185** | 1.71 % | **4594** | 1.82 % | **51097** | 1.85 % | **7** | 1.14 % | 10.10.2.154 |
| **11** | **4259** | 1.18 % | **3071** | 1.22 % | **28157** | 1.02 % | **7** | 1.14 % | 10.10.2.135 |
| **12** | **4136** | 1.15 % | **2824** | 1.12 % | **21078** | 0.76 % | **17** | 2.76 % | 10.10.2.94 |
| **13** | **3021** | 0.84 % | **885** | 0.35 % | **14108** | 0.51 % | **73** | 11.87 % | 192.168.0.183 |
| **14** | **2351** | 0.65 % | **1877** | 0.74 % | **19601** | 0.71 % | **5** | 0.81 % | 192.168.0.184 |
| **15** | **1685** | 0.47 % | **1324** | 0.53 % | **9828** | 0.36 % | **4** | 0.65 % | 192.168.0.185 |
| **16** | **818** | 0.23 % | **741** | 0.29 % | **26080** | 0.94 % | **1** | 0.16 % | 10.10.2.90 |
| **17** | **693** | 0.19 % | **347** | 0.14 % | **4358** | 0.16 % | **2** | 0.33 % | 10.10.2.152 |
| **18** | **671** | 0.19 % | **335** | 0.13 % | **7250** | 0.26 % | **2** | 0.33 % | 10.10.2.153 |
| **19** | **500** | 0.14 % | **79** | 0.03 % | **1169** | 0.04 % | **1** | 0.16 % | 192.168.0.188 |
| **20** | **493** | 0.14 % | **340** | 0.13 % | **2939** | 0.11 % | **3** | 0.49 % | 192.168.0.186 |
| **21** | **187** | 0.05 % | **150** | 0.06 % | **8530** | 0.31 % | **1** | 0.16 % | 192.168.0.182 |
| **22** | **157** | 0.04 % | **146** | 0.06 % | **626** | 0.02 % | **1** | 0.16 % | 10.10.2.98 |
| **23** | **65** | 0.02 % | **8** | 0.00 % | **107** | 0.00 % | **1** | 0.16 % | 10.10.2.162 |
| **24** | **44** | 0.01 % | **0** | 0.00 % | **44** | 0.00 % | **0** | 0.00 % | scanner.abuse.blueyonder.co.uk |
| **25** | **32** | 0.01 % | **8** | 0.00 % | **86** | 0.00 % | **0** | 0.00 % | 10.10.2.136 |
| **26** | **24** | 0.01 % | **0** | 0.00 % | **12** | 0.00 % | **0** | 0.00 % | 10.10.2.134 |
| **27** | **20** | 0.01 % | **0** | 0.00 % | **10** | 0.00 % | **0** | 0.00 % | 10.10.2.132 |
| **28** | **5** | 0.00 % | **0** | 0.00 % | **5** | 0.00 % | **0** | 0.00 % | ol5-71.fibertel.com.ar |
| **29** | **1** | 0.00 % | **0** | 0.00 % | **1** | 0.00 % | **0** | 0.00 % | 200-63-129-1.speedy.com.ar |
| **30** | **1** | 0.00 % | **0** | 0.00 % | **1** | 0.00 % | **0** | 0.00 % | 200.63.130.241 |

View All Sites

## *Top 10 of 34 Total Sites By KBytes*

| # | Hits | | Files | | KBytes | | Visits | | Hostname |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 139593 | 38.68% | 130043 | 51.60% | 1300521 | 47.12% | 60 | 9.76% | 10.10.2.3 |
| 2 | 49475 | 13.71% | 28436 | 11.28% | 505647 | 18.32% | 64 | 10.41% | 10.10.2.155 |
| 3 | 34738 | 9.63% | 26327 | 10.45% | 265509 | 9.62% | 135 | 21.95% | 10.10.2.2 |
| 4 | 49899 | 13.83% | 24500 | 9.72% | 246410 | 8.93% | 82 | 13.33% | 10.10.2.148 |
| 5 | 20712 | 5.74% | 6277 | 2.49% | 63947 | 2.32% | 60 | 9.76% | 10.10.2.133 |
| 6 | 17614 | 4.88% | 8826 | 3.50% | 61675 | 2.23% | 29 | 4.72% | 10.10.2.131 |
| 7 | 10424 | 2.89% | 4973 | 1.97% | 55568 | 2.01% | 18 | 2.93% | 10.10.2.151 |
| 8 | 6185 | 1.71% | 4594 | 1.82% | 51097 | 1.85% | 7 | 1.14% | 10.10.2.154 |
| 9 | 6885 | 1.91% | 3880 | 1.54% | 35366 | 1.28% | 21 | 3.41% | 10.10.2.130 |
| 10 | 6196 | 1.72% | 3663 | 1.45% | 30174 | 1.09% | 21 | 3.41% | 192.168.0.187 |




## *Top 3 of 3 Total Countries*

| # | Hits | | Files | | KBytes | | Country |
|---|---|---|---|---|---|---|---|
| 1 | 360835 | 99.99% | 253654 | 100.64% | 2759856 | 100.00% | Unresolved/Unknown |
| 2 | 46 | 0.01% | 0 | 0.00% | 46 | 0.00% | United Kingdom |
| 3 | 7 | 0.00% | 0 | 0.00% | 7 | 0.00% | Argentina |

---

Generated by **Webalizer Version 2.01**

## *Traffic Analysis for Burngreave CAN June – December 2003*

### Traffic Analysis for 3 -- boneidol

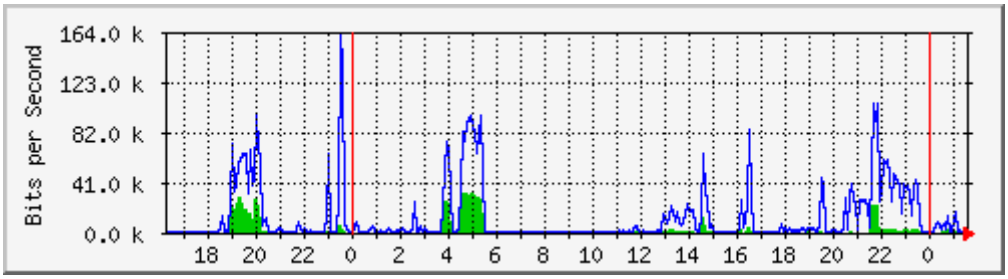
| | |
|---|---|
| System: | boneidol in "Burngreave Road" |
| Maintainer: | aland@burngreave.net |
| Description: | eth1 |
| IfType: | ethernetCsmacd (6) |
| ifName: | |
| Max Speed: | 10.0 Mbits/s |
| Ip: | 10.10.2.65 (boneidol.can.burngreave.net) |

---

The statistics were last updated **Tuesday, 30 December 2003 at 1:39** , at which time **'boneidol'** had been up for **21 days, 15:12:20** .

---

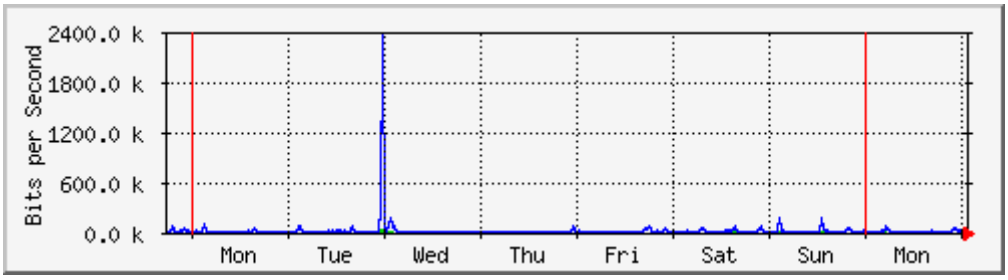
### `Daily' Graph (5 Minute Average)




Max In: 33.9 kb/s (0.3%) Average In: 2792.0 b/s (0.0%) Current In: 304.0 b/s (0.0%)
Max Out: 161.5 kb/s (1.6%) Average Out: 12.9 kb/s (0.1%) Current Out: 1696.0 b/s (0.0%)

---

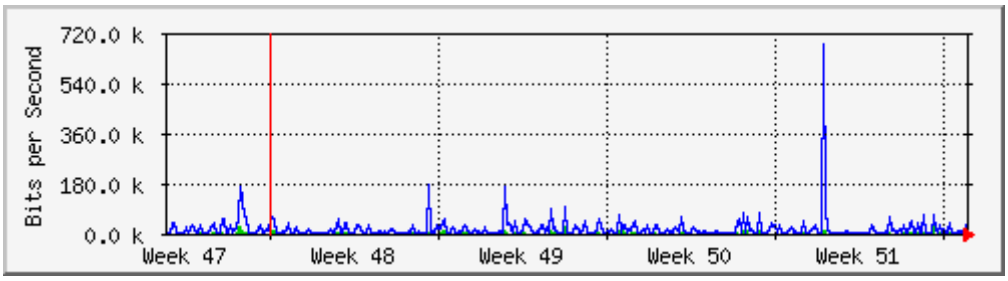
### `Weekly' Graph (30 Minute Average)




Max In: 67.0 kb/s (0.7%) Average In: 3256.0 b/s (0.0%) Current In: 768.0 b/s (0.0%)
Max Out: 2354.1 kb/s (23.5%) Average Out: 21.8 kb/s (0.2%) Current Out: 3392.0 b/s (0.0%)

---

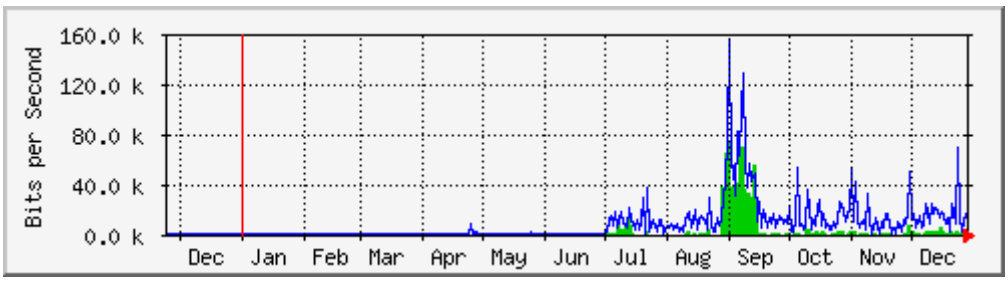
### `Monthly' Graph (2 Hour Average)




Max In: 35.1 kb/s (0.4%) Average In: 3544.0 b/s (0.0%) Current In: 2560.0 b/s (0.0%)
Max Out: 683.2 kb/s (6.8%) Average Out: 20.2 kb/s (0.2%) Current Out: 31.0 kb/s (0.3%)

---

## `Yearly' Graph (1 Day Average)




Max In: 74.7 kb/s (0.7%) Average In: 5024.0 b/s (0.1%) Current In: 5432.0 b/s (0.1%)
Max Out: 154.5 kb/s (1.5%) Average Out: 14.8 kb/s (0.1%) Current Out: 19.2 kb/s (0.2%)

---

**GREEN ###** Incoming Traffic in Bits per Second

**BLUE ###** Outgoing Traffic in Bits per Second

---

version 2.9.17 Tobias Oetiker <oetiker@ee.ethz.ch> and Dave Rand <dlr@bungi.com>

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Version 1.2, November 2002

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Finally, this document was produced between October and December 2003, and has been reviewed and revised several times with the help of the bitpart community (http://www.burngreave.net/mailman/listinfo/bitpart). As far as I'm aware all facts and statements were accurate at that time.

Alan Dawson
Burngreave
December 2003